40. (New) The DNA sequence of claim 39 wherein said sequence possesses a stop codon upstream from nucleotides encoding amino acid residues 846-870 as shown in figure 7.

41. (New) A vector which comprises the DNA sequence of claim 38.

42. (New) A vector which comprises the DNA sequence of claim 39.

43. (New) A vector which comprises the DNA sequence of claim 40.

44. (New) A host cell transformed with the vector of claim 41.

45. (New) A host cell transformed with the vector of claim 42.

46. (New) A host cell transformed with the vector of claim 43.

47. (New) A secreted human thyroid peroxidase produced from the DNA sequence of claim 38.

48. (New) A recombinant DNA sequence encoding a human thyroid peroxidase which is secreted from a cell and is recognized by a disease associated antibody.

49. (New) The DNA sequence of claim 48 wherein said sequence possesses a stop codon upstream from a transmembrane domain.

50. (New) The DNA sequence of claim 49 wherein said sequence possesses a stop codon upstream from nucleotides encoding amino acid residues 846-870 as shown in figure 7.

51. (New) A vector which comprises the DNA sequence of claim 48.